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10/786,197	02/25/2004	Gregory W. Morton	06024-UPA	3689

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EXAMINER	
NGHIEM, MICHAEL P	
ART UNIT	PAPER NUMBER
2863	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/786,197	MORTON ET AL.	
	Examiner	Art Unit	
	Michael P. Nghiem	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10-16-06, 10-23-06, and 02-02-07*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,15,17,31-37,39-54,85-88 and 93-101* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *13 and 15* is/are allowed.

6)☒ Claim(s) *1,3,6-12,17,31-37,39-51,53,54,85-88,93,94,97 and 99-101* is/are rejected.

7)☒ Claim(s) *2,4,5,52,95,96 and 98* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The Amendments filed on October 16, 2006, October 23, 2006, and February 2, 2007 have been acknowledged.

Claim Objections

Claim 53 is objected to because of the following informalities:

- the claim does not end with a period.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 17 and 93-101 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17, the step of removing any outliers from said data set (lines 8-9) should be related to the step of removing a set of deviating data from said data set (line 11).

Claim 93, is incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: steps tying step c with steps a and/or b; steps tying step d with steps a, b, and/or c.

The remaining claims are also rejected under 35 U.S.C. 112, second paragraph, for being dependent upon a rejected base claim.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321□ may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 9, 17, 31, 39-50, 85, 93, and 94 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,915,237 (Hashemian) in view of U.S. Patent No. 6,973,413

(Hashemian). Although the conflicting claims are not identical, they are not patentably distinct from each other because Hashemian ('237) claims:

"An apparatus (claim 1, line 1) for automating cross calibrations of plant instruments (claim 1, lines 1-2 and 7-8), said apparatus comprising:

- a processor (claim 1, line 9) in communication with a data storage system (claim 1, line 13), said data storage system being a part of a plant monitoring system (claim 1), said processor programmed to execute a process (claim 1, lines 11-12) including

- loading a data set from said data storage system (claim 1, line 14), said data set including a plurality of measured process values from a plurality of instruments (sampled data, claim 1, line 13, from sensors, claim 1, line 8),

- selecting for analysis a set of data from said data set (screens sampled data for outliers, claim 1, line 14),

- removing a set of deviating data from said set of data (claim 1, lines 14-15),

- analyzing a set of remaining data (claim 1, line 16) for cross-calibration (claim 1, lines 6-8, lines 61-63, lines 21-22),

- recalibrating any one of said plurality of instruments that produce at least one data point in said set of deviating data (claim 1, lines 21-22);

- with a set of results of said step of analyzing stored for reporting of said set of results (claim 1, line 24)."

Hashemian ('237) does not claim:

- said plurality of instruments including at least one redundant instrument, said plurality of measured process values including a plurality of temperature measurements obtained during isothermal conditions;

- said process executed by said processor further includes providing a user interface for interacting with an operator of said processor;

- said user interface includes entering a plurality of configuration settings, each of said plurality of configuration settings containing a data value stored by said processor;

- displaying said plurality of configuration settings,

- said user interface includes options for printing and displaying a plurality of information associated with said process step of loading a data set;

- providing said user interface includes options for selecting a set of user selected data associated with said process step of selecting for analysis;

- providing said user interface includes options for displaying and printing a plurality of information associated with said process step of removing said set of deviating data;

- providing said user interface includes options for displaying and printing a plurality of information associated with said process step of analyzing said set of remaining data.

- providing said user interface includes options for loading a plurality of information associated with a process step of generating a report;

- providing said user interface includes options for displaying a plurality of information associated with a process step of generating a report;

- providing said user interface includes options for saving a plurality of information

associated with a process step of generating a report;

- providing said user interface includes options for printing a plurality of information associated with a process step of generating a report;

- providing said user interface includes options for displaying and printing a plurality of recalibration information associated with said process step of recalibrating a deviating instrument;

- providing said user interface includes options for saving a plurality of recalibration information associated with said process step of recalibrating a deviating instrument;

- said data set including a plurality of measured process values from a plurality of resistance temperature device (RTD) instruments.

However, Hashemian ('413) discloses:

- said plurality of instruments including at least one redundant instrument (column 3, lines 19-22), said plurality of measured process values including a plurality of temperature measurements obtained during isothermal conditions (column 1, lines 22-23; column 3, lines 31-35),

- providing a user interface (112) for interacting with an operator of said processor (column 3, lines 4-7; Fig. 1),

- said user interface includes entering a plurality of configuration settings, each of said plurality of configuration settings containing a data value stored by said processor (column 3, lines 3-9; Fig. 1);

- providing said user interface includes displaying (via display of 112) said plurality of configuration settings (column 3, lines 3-6),

- providing said user interface includes options for printing (column 4, lines 15-18) and displaying a plurality of information associated with said process step of loading a data set (112 displays data/action from/by computer 110, column 3, lines 3-7);

- providing said user interface includes options for selecting a set of user selected data associated with said process step of selecting for analysis (inherent with initiating actions by computer 110, column 3, lines 5-6);

- providing said user interface includes options for displaying and printing (column 4, lines 15-18) a plurality of information associated with said process step of removing said set of deviating data (displayed actions, column 3, lines 5-6, are deemed associated with removal of outlier);

- providing said user interface includes options for displaying and printing (column 4, lines 15-18) a plurality of information associated with said process step of analyzing said set of remaining data (displayed actions, column 3, lines 5-6, are deemed associated with analyzing data);

- providing said user interface includes options for loading a plurality of information associated with a process step of generating a report (displayed data, column 3, lines 3-4);

- providing said user interface includes options for displaying a plurality of information (via 112) associated with a process step of generating a report;

- providing said user interface includes options for saving a plurality of information

associated with a process step of generating a report (saved data in 114, column 3, lines 3-4);

- providing said user interface includes options for printing a plurality of information associated with a process step of generating a report (column 4, lines 15-18);

- providing said user interface includes options for displaying and printing a plurality of recalibration information associated with said process step of recalibrating a deviating instrument (column 4, lines 15-18);

- providing said user interface includes options for saving a plurality of recalibration information associated with said process step of recalibrating a deviating instrument (saving is inherent with generating output report, column 4, lines 15-18);

- said data set including a plurality of measured process values from a plurality of resistance temperature device (RTD) instruments (column 4, lines 61-65).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Hashemian ('237) with measurements involving redundant and RTD instruments and user interface as disclosed by Hashemian ('413) for the purpose of verifying the performance and reliability of instruments and processes.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 6-12, 17, 31-37, 39-51, 53, 54, 85-88, 93, 94, 97, and 99-101 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashemian (US 6,915,237).

Regarding claims 1, 10-12, 17, 31, 39, 51, 85, and 93, Hashemian discloses an apparatus (10, Fig. 1) for automating cross calibrations of plant instruments (column 2, lines 37-41), said apparatus comprising:

- a processor (110) in communication with a data storage system (114; also note column 4, lines 43-48), said data storage system being a part of a plant monitoring system (Fig. 1), said processor programmed to execute a process (column 2, lines 37-40) including

- loading a data set from said data storage system (column 5, lines 6-7), said data set including a plurality of measured process values from a plurality of instruments (column 4, lines 21-22, 45-46), said plurality of instruments including at least one redundant instrument (column 3, lines 18-21), said plurality of measured

process values including a plurality of temperature measurements obtained during isothermal conditions (column 1, lines 19-20; column 3, lines 30-33),

- selecting for analysis a set of data from said data set (screens data for outliers, Abstract, line 4),

- removing a set of deviating data from said set of data (column 12, lines 2 3),

- analyzing a set of remaining data (column 12, lines 4-7) for cross-calibration (column 11, lines 61-63; column 2, lines 60-61),

- recalibrating any one of said plurality of instruments that produce at least one data point in said set of deviating data (column 12, lines 8-11).

Regarding claims 3 and 97, Hashemian discloses selecting said set of data consisting of a plurality of data points that fall within a specified range and calculating an upper temperature and a lower temperature for at least one region (column 4, lines 63-66).

Regarding claims 6, 10-12, 32, 86, and 99, Hashemian further discloses calculating new coefficients (calibration tables, column 2, lines 61-62) for said deviating instrument (column 2, lines 61-62).

Regarding claims 7, 10-12, 33, 87, and 100, Hashemian further discloses calculating a recalibration uncertainty value for said deviating instrument (provide new calibration

tables since calibration value has been lost, column 2, lines 60-62).

Regarding claims 8, 34, 88, and 101, Hashemian discloses calculating resistance versus temperature for said deviating instrument, calculating new coefficients for said deviating instrument, producing a recalibration curve (column 4, lines 63-66), and calculating a recalibration uncertainty value (column 2, lines 60-62).

Regarding claim 9, Hashemian discloses providing a user interface (112) for interacting with an operator of said processor (column 3, lines 4-6; Fig. 1).

Regarding claim 11, Hashemian further discloses said plurality of measured process values obtained during equilibrium conditions (parameters such as pressure and temperature are elated to sensors 102a, ... 102n, column 3, lines 30-33).

Regarding claim 35, Hashemian discloses calculating a recalibration curve that includes determining a difference between a measured temperature value and a recalibrated temperature value (inherent with determining whether a group of temperature sensors have lost their calibration (column 2, lines 60-61).

Regarding claim 36, Hashemian discloses calculating a recalibration uncertainty value and extrapolating said recalibration uncertainty value to accommodate a limit value (column 7, lines 10-12).

Regarding claim 37, Hashemian discloses calculating a recalibration uncertainty value and adjusting a limit value to accommodate said recalibration uncertainty value (extrapolating, column 7, lines 10-12).

Regarding claim 39, Hashemian further discloses said user interface includes entering a plurality of configuration settings, each of said plurality of configuration settings containing a data value stored by said processor (column 3, lines 2-6; Fig. 1).

Regarding claim 40, Hashemian discloses providing said user interface includes displaying (via display of 112) said plurality of configuration settings (column 3, lines 2-4).

Regarding claim 41, Hashemian discloses providing said user interface includes options for printing (column 12, lines 11, 25, 41, 52) and displaying a plurality of information associated with said process step of loading a data set (112 displays data/action from/by computer 110, column 3, lines 2-6).

Regarding claim 42, Hashemian discloses providing said user interface includes options for selecting a set of user selected data associated with said process step of selecting for analysis (inherent with initiating actions by computer 110, column 3, lines 5-6).

Regarding claim 43, Hashemian discloses providing said user interface includes options for displaying and printing (column 12, lines 11, 25, 41, 52) a plurality of information associated with said process step of removing said set of deviating data (displayed actions, column 3, lines 5-6, are deemed associated with removal of outlier (column 12, lines 2-3).

Regarding claim 44, Hashemian discloses providing said user interface includes options for displaying and printing (column 12, lines 11, 25, 41, 52) a plurality of information associated with said process step of analyzing said set of remaining data (displayed actions, column 3, lines 5-6, are deemed associated with analyzing data (column 12, line 4).

Regarding claim 45, Hashemian discloses providing said user interface includes options for loading a plurality of information associated with a process step of generating a report (displayed data, column 3, lines 3-4).

Regarding claim 46, Hashemian discloses providing said user interface includes options for displaying a plurality of information associated with a process step of generating a report (displayed data, column 3, lines 3-4, is the report).

Regarding claim 47, Hashemian discloses providing said user interface includes options for saving a plurality of information associated with a process step of generating a report

(saved data in 114, column 3, lines 3-4).

Regarding claim 48, Hashemian discloses providing said user interface includes options for printing a plurality of information associated with a process step of generating a report (column 12, lines 11, 25, 41, 52).

Regarding claim 49, Hashemian discloses providing said user interface includes options for displaying and printing a plurality of recalibration information (column 12, lines 11, 25, 41, 52) associated with said process step of recalibrating a deviating instrument.

Regarding claim 50, Hashemian discloses providing said user interface includes options for saving a plurality of recalibration information associated with said process step of recalibrating a deviating instrument (saving is inherent with generating output report, column 12, lines 11, 25, 41, 52).

Regarding claim 51, Hashemian further discloses determining at least one average value from said data set (via 334, Fig. 3), and determining new coefficients for any one of said plurality of instruments that produce at least one data point in said set of deviating data, said new coefficients stored for reporting of said new coefficients (via calibration table, column 2, lines 61-62; column 4, lines 14-16).

Regarding claim 53, Hashemian discloses said plurality of instruments includes at least

one redundant instrument (column 3, lines 18-19)

Regarding claim 54, Hashemian discloses said plurality of measured process values includes a plurality of temperature measurements obtained during isothermal conditions (column 1, lines 19-20; column 3, lines 30-33).

Regarding claim 85, Hashemian further discloses a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine (Abstract, lines 2-5) to perform method steps for automating cross calibrations of plant instruments (column 2, lines 37-44).

Regarding claim 94, Hashemian discloses removing a set of deviating data from said set of data (column 12, lines 8-11).

Allowable Subject Matter

Claims 2, 4, 5, 52, 95, 96, and 98 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13 and 15 are allowed.

Reasons For Allowance

The **combination** as claimed wherein said process step of loading a data set includes selecting a file, loading a set of resistance temperature device (RTD) data, calculating RTD averages from said set of RTD data, loading a set of thermocouple data, calculating thermocouple averages from said set of thermocouple data, and matching timeslices (claims 2, 15, 96) or said process step of removing said set of deviating data includes calculating an average narrow range standard deviation value, calculating a fluctuation standard deviation value of average narrow range fluctuations, rejecting a timeslice for said fluctuation standard deviation outside a specified range, and matching thermocouple times to resistance temperature device (RTD) times (claims 4, 95) or said set of data includes a set of resistance temperature device (RTD) data and a set of thermocouple data, said process step of analyzing said set of remaining data includes calculating a set of RTD deviations from said set of RTD data, calculating an average value and a standard deviation value from said set of RTD deviations, calculating a set of thermocouple deviations from said set of thermocouple data, and calculating an average of said set of thermocouple deviations (claims 5, 98) or said process step of analyzing further including calculating a set of RTD deviations from said set of RTD data, calculating an average value and a standard deviation value from said set of RTD deviations, calculating a set of thermocouple deviations from said set of thermocouple data, and calculating an average of said set of thermocouple deviations (claim 13) or after said step of retrieving said data set, a process step of sorting said

data set (claim 52) is not disclosed, suggested, or made obvious by the prior art of record.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-H.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

April 9, 2007